

国产金丝桃属(藤黄科)新植物

^{1 2}吴立宏* ^{1 2}杨得坡** ²王发松 ²张宏达

✧ 中山大学基因工程教育部重点实验室 广州 510275)

✧ 中山大学生命科学学院 广州 510275)

New taxa of *Hypericum* (Clusiaceae) from China

^{1 2}WU Li-Hong* ^{1 2}YANG De-Po** ²WANG Fa-Song ²CHANG Hung-Ta

✧ Key Laboratory of Gene Engineering of the Ministry of Education, Sun Yat-sen University, Guangzhou 510275, China)

✧ School of Life Science, Sun Yat-sen University, Guangzhou 510275, China)

Abstract *Hypericum hubeiense* L. H. Wu & D. P. Yang, *H. enshiense* L. H. Wu & F. S. Wang and *H. erectum* Thunb. ssp. *longisepalum* L. H. Wu & D. P. Yang, three new taxa of *Hypericum* from Badong, Hubei, China, are described. *H. hubeiense* is closely related to *H. asahinae* Makino by having sessile leaves with cordate-amplexicaul base, sepals and petals with linear black glands, but differs by having leaves with black intramarginal glands, leaf blade without any glands, unequal sepals, obovate-oblong petals with more black glands, and more stamens. *H. enshiense* resembles *H. faberi* R. Keller ex Hand.-Mazz. in the creeping or ascending habit, the petiolate leaves with black intramarginal glands, but differs by the leaf blades with sparse black glands on lower surface and dense tiny papillae on lower surface, the leaf-like bracts and bracteoles, the larger sepals with sharp tip and linear black glands, the petals with linear black glands and, more stamens. *H. erectum* ssp. *longisepalum* differs from *H. erectum* Thunb. ssp. *erectum* by having larger sepals, shorter styles and seeds without carinate.

Key words *Hypericum* L., Clusiaceae, new taxa, Hubei, China.

摘要 描述了采集于湖北巴东县的金丝桃属 *Hypericum* L. 的 3 个新分类群, 即湖北小连翘 *H. hubeiense* L. H. Wu & D. P. Yang、恩施小连翘 *H. enshiense* L. H. Wu & F. S. Wang 和长萼小连翘 *H. erectum* Thunb. ssp. *longisepalum* L. H. Wu & D. P. Yang。湖北小连翘与 *H. asahinae* Makino 相似, 表现在叶无柄, 基部心形抱茎, 花萼和花瓣上具黑色腺条, 区别在于叶近边缘腺体全为黑色, 叶片上部无腺体, 花萼不等大, 花瓣倒卵状矩圆形, 边缘上黑色腺体较多, 雄蕊较多。恩施小连翘在形态上与扬子小连翘 *H. faberi* R. Keller ex Hand.-Mazz. 相似, 表现在具有匍匐或斜升的习性, 叶有柄, 近边缘腺体黑色, 区别在于叶片下面具有松散的黑色腺体, 叶下面密具细小的乳突, 苞片和小苞片叶状, 花萼较大, 顶部锐尖, 花萼和花瓣上面具黑色腺条, 雄蕊较多。长萼小连翘与 *H. erectum* Thunb. ex Murray ssp. *erectum* 的不同点在于花萼较大, 花柱较短, 种子无龙骨状突起。

关键词 金丝桃属; 藤黄科; 新分类群; 湖北; 中国

2001 年和 2002 年 7 月到 8 月, 我们对湖北巴东县的金丝桃属 *Hypericum* L. 药用植物资源进行了调查, 发现下面 3 个新分类群。

2003-03-28 收稿, 2003-10-10 收修改稿。

基金项目: 广州市科委 2000 年重大项目资助 (2000-Z-101-01)。

* 现地址: 上海中医药大学上海中药标准化研究中心, 上海 201203 (Present address: Shanghai Research Center for Standardization of Traditional Chinese Medicine, Shanghai 201203, China)

** 通讯作者 (Author for correspondence. E-mail: ls39@zsu.edu.cn)

1 湖北小连翘 新种 图 1

Hypericum hubeiense L. H. Wu & D. P. Yang, sp. nov. Fig. 1

Affine *H. asahinae* Makino, sed foliis praeter marginem haud glandulosis, glandulis marginalibus omnino nigris, sepalis inaequilongis, glandulis marginalibus nigris numerosis, petalis ubique flavis saepe obovato-oblongis 8.5 – 12 mm longis 2.5 – 3.5 mm latis, ad apicem glandulis marginalibus nigris numerosis, staminibus 70 – 90 differt.

Herba perennis, 40 – 55 cm alta. Radices laterales et radices adventitiae numerosae. Caules teretes, erecti, saepe simplices vel ad apicem ramosi. Folia sessilia, ovata, 1.5 – 3.8 cm longa, 1 – 1.6 cm lata, apice rotundata, basi cordata, amplexicaulia, intra marginem dense nigro-glandulosa, dorso haud glandulosa, nervis lateralibus 3 – 5-jugis ascendentibus. Dichasia terminalia; bracteae lanceolatae, 3 – 7 mm longae, 1 – 2 mm latae, margine nigro-glandulosae, dorso luteo-glandulosae vel striatae. Flores circ. 18 mm diam.; pedicelli 1 – 6 mm longi; sepala anguste ovata vel lanceolata, inaequilonga, 4 – 6.8 mm longa, 0.8 – 1.8 mm lata, apice acuta, margine dense nigro-glandulosa, dorso nigro-glanduloso-striata; petala obovato-oblonga vel anguste ovata, 8.5 – 12 mm longa, 2.5 – 3.5 mm lata, dorso nigro-glanduloso-striata, apice margine nigro-glandulosa; stamina 70 – 90, in fasciculos 3 connata, in quoque fasciculo 24 – 34, filamentis 6 – 9.5 mm longis, antheris nigro-glandulosis; ovarium ovoideum, 1.5 – 3.5 mm longum, circ. 1.5 mm latum, stylis 4.5 – 6.5 mm longis. Capsulae ovoideae, 5 – 6 mm longae, circ. 4 mm latae, longistrorsum glanduloso-striatae. Semina fusca, cylindrica, 0.7 – 0.8 mm longa, circ. 0.3 mm lata, apice rotundata, submucronata, scrobiculata, inevidenter 1-carinata. Fl. Jul. – Aug. Fr. Aug. – Sept.

多年生草本, 高 40 – 55 cm。侧根和不定根多数。茎圆柱形, 直立, 常单一或在顶部分枝。叶无柄, 卵圆形, 长 1.5 – 3.8 cm, 宽 1 – 1.6 cm, 顶端圆形, 基部心形抱茎, 近边缘密生黑色腺点, 叶背面无腺体, 侧脉 3 – 5 对, 斜升。二歧状聚伞花序顶生, 苞片披针形, 长 3 – 7 mm, 宽 1 – 2 mm, 边缘具黑色腺体, 背面具淡黄色腺体或腺条。花直径约 18 mm, 花梗长 1 – 6 mm, 花萼狭卵圆形或披针形, 不等大, 长 4 – 6.8 mm, 宽 0.8 – 1.8 mm, 顶端锐尖, 边缘密被黑色腺体, 背面具黑腺条; 花瓣倒卵状矩圆形或狭卵圆形, 长 8.5 – 12 mm, 宽 2.5 – 3.5 mm, 背面具黑腺条, 顶部边缘具黑色腺体; 雄蕊 70 – 90 枚, 3 束, 每束 24 – 34 枚, 花丝长 6 – 9.5 mm, 花药具黑色腺体; 子房卵球状, 长 1.5 – 3.5 mm, 宽约 1.5 mm, 花柱长 4.5 – 6.5 mm。蒴果卵球状, 长 5 – 6 mm, 宽约 4 mm, 具纵向腺条纹。种子棕色, 圆柱状, 长 0.7 – 0.8 mm, 宽约 0.3 mm, 顶端圆钝, 略具短尖头, 表面具细蜂窝纹, 一侧有一不明显的龙骨状突起。花期 7 – 8 月, 果期 8 – 9 月。

China. Hubei (湖北): Badong (巴东), Lücongpo (绿葱坡), alt. 1600 m, in thickets, 2001-07-27, L. H. Wu & F. S. Wang (吴立宏, 王发松) 01035 (holotype, here designated, SYS; isotype, PE); same locality, 2002-07-31, L. H. Wu et al. 02006 (SYS).

本种相似于 *H. asahinae* Makino, 区别在于本种叶除了近边缘外无腺体, 近边缘腺体全为黑色, 花萼不等大, 边缘腺体黑色, 多数, 花瓣黄色, 通常倒卵状矩圆形, 长 8.5 – 12 mm, 宽 2.5 – 3.5 mm, 顶部边缘具黑色腺体, 多数; 雄蕊 70 – 90 枚。

本种常见于灌草丛中, 迄今只见于模式产地的巴东县。*H. asahinae* 则是日本特有种。二者的亲缘关系也许是东亚植物区系 (中国 – 日本) 紧密亲缘的一个证据。根据 Robson (2001) 的系统, 该种应属于小连翘亚组 sect. *Hypericum* subsect. *Erecta* Robson。

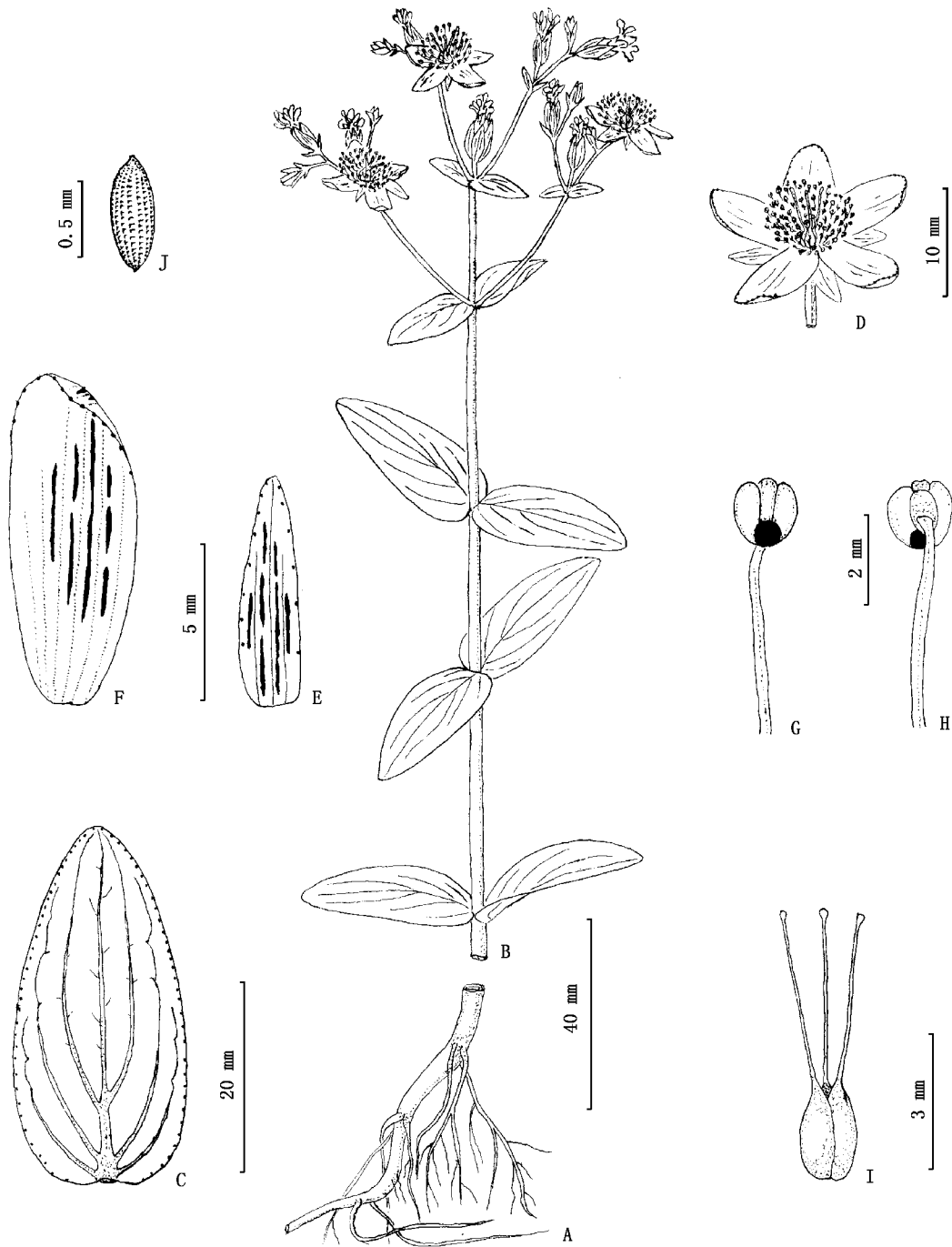


图 1 湖北小连翘 A, B, 植株; C, 叶; D, 花; E, 花萼; F, 花瓣; G, 花药(前面); H, 花药(后面); I, 雌蕊; J, 种子。(吴立宏根据吴立宏和王发松 01035 号标本绘)

Fig. 1. *Hypericum hubeiense* L. H. Wu & D. P. Yang. A, B, habit; C, leaf; D, flower; E, sepal; F, petal; G, anther (front); H, anther (back); I, pistil; J, seed. Drawn by L. H. WU from L. H. Wu & F. S. Wang 01035.

2 恩施小连翘 新种 图 2

Hypericum ensiense L. H. Wu & F. S. Wang, sp. nov. Fig. 2

Species habitu cum *H. faberi* R. Keller ex Hand.-Mazz. optime congruens, sed foliis sparsim nigro-glandulosis, vulgo non lutello-glandulosis, dorso dense papillatis, papillis minimis, bracteis et bracteolis foliiformibus, floribus majoribus, sepalis anguste ovatis vel lanceolatis, apice acutis, nigro-glanduloso-striatis, petalis nigro-glanduloso-striatis, staminibus 50–60 in fasciculos 3 connatis, in quoque fasciculo 14–22, seminibus longioribus differt.

Herba perennis, 14–40 cm alta. Radices laterales et radices adventitiae numerosae. Caules teretes, erecti vel decumbentes, ramosi. Folia breviter petiolata, obovata vel oblonga, 1–3.8 cm longa, 0.5–1.3 cm lata, apice obtusa, basi angustata vel anguste cuneata, supra viridia, subtus viridula, margine et dorso laxe nigro-glandulosa, dorso vulgo non luteolo-glandulosa, dense minuteque papillata, nervis lateralibus 3-jugis ascendentibus; petioli 0.5–2.5 mm longi. Dichasia terminalia; bracteae et bracteolae foliiformes. Flores 12–15 mm diam.; pedicelli 1–5 mm longi; sepala anguste ovata vel lanceolata, inaequilonga, 4–6 mm longa, 0.8–1.6 mm lata, apice acuta, dorso nigro-glanduloso-striata; petala oblonga, 6–9 mm longa, 1.5–2.5 mm lata, margine superne nigro-glandulosa, dorso nigro-glanduloso-striata; stamina 50–60, in fasciculos 3 connata, in quoque fasciculo 14–22, filamentis 4–7 mm longis, antheris nigro-glandulosis; ovarium ovoideum, 2–3 mm longum, circ. 1.5 mm latum, stylis 2.5–3.5 mm longis. Capsulae ovoideae, 4–6 mm longae, 3–4 mm latae, longistrorsum glanduloso-striatae. Semina fusca, cylindrica, circ. 0.8 mm longa, circ. 0.4 mm lata, apice rotundata, scrobiculata, maxime incom-pie 1-carinata. Fl. Jul. – Aug. Fr. Aug. – Sept.

多年生草本,高 14–40 cm。侧根和不定根多数。茎圆柱形,通常匍匐生根或平卧,多分枝。叶具短柄,倒卵圆形或矩圆形,长 1–3.8 cm,宽 0.5–1.3 cm,顶端圆钝,基部渐狭或狭楔形,腹面绿色,背面淡绿色,边缘和背面疏具黑色腺体,背面常无淡黄色腺体,密被细小的乳突,侧脉 3 对,斜升;叶柄长 0.5–2.5 mm。二歧状聚伞花序顶生;苞片和小苞片叶状。花直径 12–15 mm;花梗长 1–5 mm;花萼狭卵圆形或披针形,不等大,长 4–6 mm,宽 0.8–1.6 mm,顶端锐尖,背面具黑色腺条;花瓣矩圆形,长 6–9 mm,宽 1.5–2.5 mm,顶部边缘具黑色腺体,背面具黑色腺条;雄蕊 50–60 枚,3 束,每束 14–22 枚,花丝长 4–7 mm,花药具黑色腺体;子房卵球状,长 2–3 mm,宽约 1.5 mm,花柱长 2.5–3.5 mm。蒴果卵球状,长 4–6 mm,宽 3–4 mm,具纵向腺条纹。种子棕色,长约 0.8 mm,宽约 0.4 mm,顶端圆钝,表面具细蜂窝纹,有一极不明显的龙骨状突起。花期 7–8 月。果期 8–9 月。

China. Hubei (湖北): Badong (巴东), Dazhiping (大支坪), alt. 1000–1300 m, forest margin, field side and road side, 2001-07-24, L. H. Wu & F. S. Wang (吴立宏,王发松) 01022 (holotype, here designated, SYS); same locality, 2001-07-23, 01018 (SYS, PE); same locality, 2001-07-26, 01029 (SYS); same locality, 2001-07-28, 01040 (SYS).

本种在形态上与 *H. faberi* R. Keller ex Hand.-Mazz. 极相似,但叶疏具黑色腺体,通常无淡黄色腺体,背面密具细小乳突,苞片和小苞片叶状,花较大,花萼狭卵圆形或披针形,顶端锐尖,花萼和花瓣具黑色腺条,雄蕊 50–60 枚,3 束,每束 14–22 枚,种子较大而不同。

本种常见于林缘、路边和田边,只见于模式产地的巴东县。而 *H. faberi* (也是中国特有种)则分布于陕西、安徽、湖南、广西、四川、贵州、云南东北部(李锡文,1990),河南和

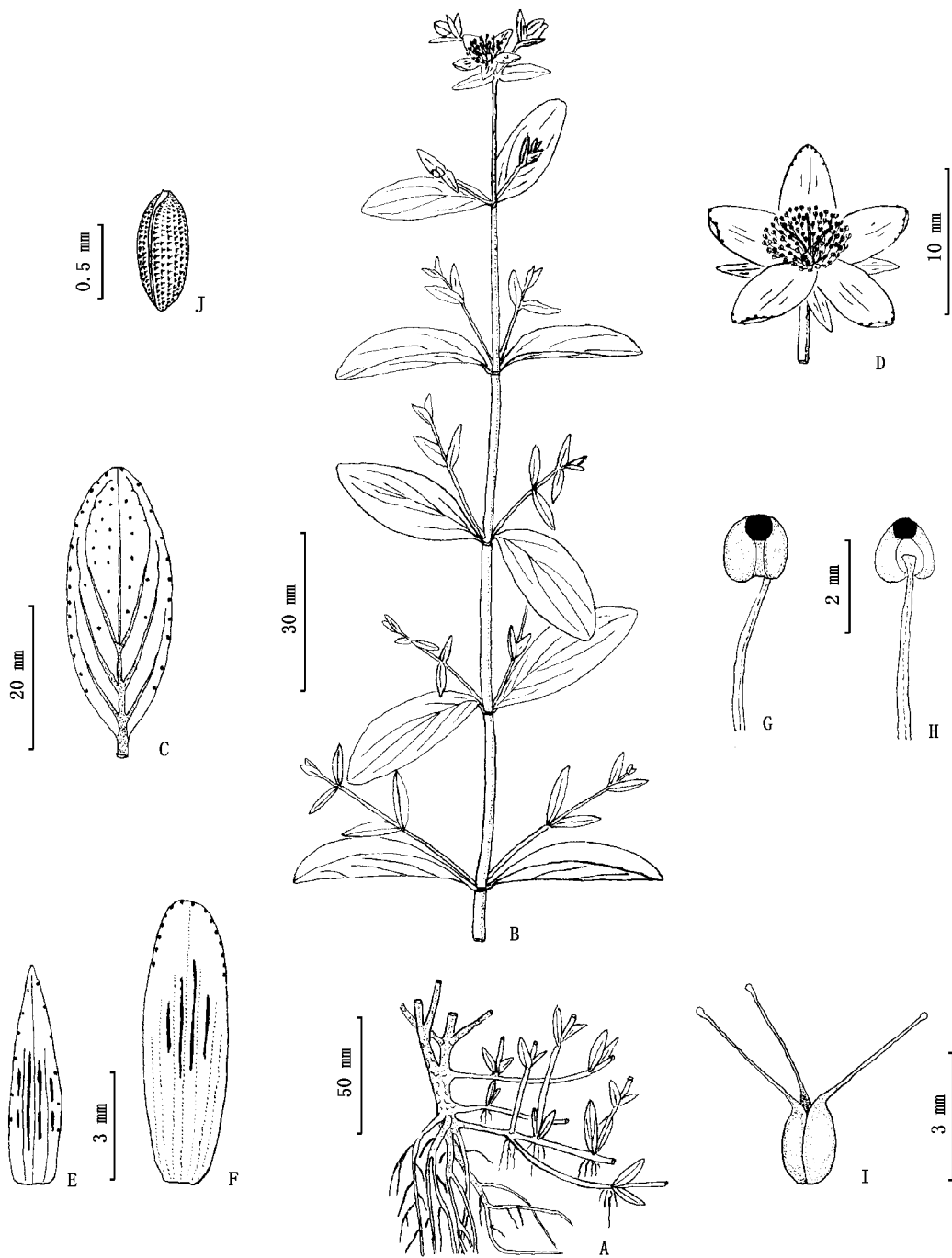


图2 恩施小连翘 A, B, 植株; C, 叶; D, 花; E, 花萼; F, 花瓣; G, 花药(前面); H, 花药(后面); I, 雌蕊; J, 种子。(吴立宏根据吴立宏和王发松 01022 号(A) 和 01018 号(B-J) 标本绘)

Fig. 2. *Hypericum ensiense* L. H. Wu & F. S. Wang. A, B, habit; C, leaf; D, flower; E, sepal; F, petal; G, anther (front); H, anther (back); I, pistil; J, seed. Drawn by L. H. WU from L. H. Wu & F. S. Wang 01022 (A) and 01018 (B-J).

湖北(新记录分布区)。根据 Robson 的最近研究(Robson, 2001), 湖北小连翘应当属于小连翘亚组 sect. *Hypericum* subsect. *Erecta* 的新成员。

3 长萼小连翘

Hypericum erectum Thunb. ex Murray ssp. ***longisepalum*** L. H. Wu & D. P. Yang, ssp. nov.

A ssp. *erecto* differt sepalis majoribus (3–4.5 mm longis 0.8–2 mm latis), stylis ovario brevioribus, seminibus non carinatis.

China. Hubei (湖北): Badong (巴东), Lücongpo (绿葱坡), alt. 1600 m, forest margin and thickets, 2001-07-27, L. H. Wu & F. S. Wang (吴立宏, 王发松) 01033 (holotype, here designated, SYS; isotype, PE), Dazhiping (大支坪), 2001-07-21, L. H. Wu & F. S. Wang (吴立宏, 王发松) 01020 (SYS) same locality, 2001-07-24, 01024 (SYS), same locality, 2001-07-26, 01028 (SYS).

本亚种与原亚种的区别在于花萼较大(3–4.5 × 0.8–2 mm), 花柱较子房为短, 种子无龙骨状突起。

本亚种可见于模式产地的林缘和灌草丛中。原亚种则分布于东亚(从华南、华中和华东至日本、朝鲜和俄罗斯萨哈林岛)。根据 Robson 的意见(私人通讯), *H. erectum* 是一个广布且多变的种, ssp. *longisepalum* 的长的花萼暗示其有不同的亲缘。我们反复检查和比较了 IBSC 和 SYS 的 *H. erectum* 的标本之后, 倾向于将 ssp. *longisepalum* 作为 *H. erectum* 的新亚种, 属于小连翘亚组 sect. *Hypericum* subsect. *Erecta*。

致谢 N. Robson 先生审阅全文, 并提出修改意见, 他还提供了一个日本种的描述和两篇他的金丝桃属专著; 叶创兴先生和戴水连先生对拉丁文提出了修改意见; 中国科学院华南植物研究所标本馆 (IBSC) 和中山大学植物标本馆 (SYS) 提供了查阅标本的便利, 在此一并致谢!

参 考 文 献

- Li H-W (李锡文). 1990. *Hypericum* Linn. In: Flora Reipublicae Popularis Sinicae (中国植物志). Beijing: Science Press. 50 (2): 1–72.
- Robson N K B. 2001. Studies in the genus *Hypericum* L. (Guttiferae) 4 (1). Sections 7. Roscyna to 9. *Hypericum* sensu lato (part 1). Bulletin of the Natural History Museum, Botany 31: 37–88.